



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

-----X  
Re Application of:

Juergen BREITENBACHER et al.

: Examiner: John F. MORTELL

For: METHOD AND DEVICE FOR BRAKING :  
TWO WHEELS OF A VEHICLE :

Filed: September 22, 2005

: Art Unit: 3657

Serial No.: 10/524,599

MAIL STOP APPEAL BRIEF - PATENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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(33,865)

**APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37**

SIR:

In the above-identified patent application ("the present application"), Appellants filed a Notice Of Appeal on March 22, 2010, from the Final Office Action issued by the U.S. Patent and Trademark Office on December 2, 2009 (the two-month appeal brief due date is extended by one month to June 22, 2010 by the accompanying Transmittal and Petition to Extend).

In the Final Office Action, claims 14 and 16 to 46 were finally rejected. A Response After A Final Office Action was mailed on February 11, 2010, and an Advisory Action was mailed on March 8, 2010.

It is understood for purposes of the appeal that any Amendments to date have already been entered by the Examiner, and that the Response After A Final Office Action of February 11, 2010 did not include any amendments.

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*As to the length of the “concise explanation” of the subject matter defined in each of the claims involved in the appeal (see 41.37), the “concise explanation” language is like the “concise explanation” requirement of former Rule 37 C.F.R. § 1.192. Accordingly, the length of the concise explanation provided is acceptable, since it would have been acceptable under 37 C.F.R. § 1.192 and since it specifically defines the subject matter of the independent claims involved in the appeal. In the filing of many appeal briefs under the old rule for the present Assignee, the length of the “concise explanation” has always been ultimately accepted by the Patent Office.*

It is therefore respectfully submitted that this Appeal Brief complies with 37 C.F.R. § 41.37.

It is respectfully submitted that the final rejections of claims 14 and 16 to 46 should be reversed for the reasons explained below.

**1. REAL PARTY IN INTEREST**

The real party in interest in the present appeal is Robert Bosch GmbH (“Robert Bosch”) of Stuttgart in the Federal Republic of Germany. Robert Bosch is the assignee of the entire right, title and interest in the present application.

**2. RELATED APPEALS AND INTERFERENCES**

There are no interferences or other appeals related to the present application, which “will directly affect or be directly affected by or have a bearing on the Board’s decision in the pending appeal”.

**3. STATUS OF CLAIMS**

**CLAIMS 1 TO 13 AND 15 ARE CANCELED.**

Claims 14 and 16 to 46 are rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,388,896 (“Hartmann”) in view of U.S. Patent No. 6,030,055 (“Schubert”).

Appellant therefore appeals from the final rejections of pending claims 14 and 16 to 46. A copy of all of the pending and appealed claims 14 and 16 to 46 is attached hereto in the Claims Appendix.

**4. STATUS OF AMENDMENTS**

In response to the Final Office Action mailed on December 2, 2009, Appellants filed a Response After A Final Office Action, which was mailed on February 11, 2010. It is understood for purposes of the appeal that any Amendments to date have already been entered by the Examiner, and that the Response After A Final Office Action of February 11, 2010 did not include any amendments.

**5. SUMMARY OF CLAIMED SUBJECT MATTER**

The concise explanation of the summary of the claimed subject matter is as follows, as described in the context of the present application.

*As to claim 14, it is to a method for braking two wheels of a vehicle, including linking a first value of a first brake pressure in a first wheel brake cylinder allocated to a first wheel of the two wheels with a second value of a second brake pressure in a second wheel brake*

*cylinder allocated to a second wheel of the two wheels, wherein the linking is given on the basis of hydraulic pressure differentials dropping at respective intake valves including a first intake valve and a second intake valve.* In the present method, in a first wheel of the vehicle the brake pressure is set and the electric current through the coil of the intake valve is known. If current  $i_{\text{regulate}}$  flows through the coil of the intake valve of the first wheel, pressure differential  $\Delta p_{\text{regulate}}$  decreases at the appertaining intake valve. Pressure differential  $\Delta p_{\text{control}}$  decreasing at the intake valve of another wheel (i.e. the second wheel) is controlled based on the pressure differential  $\Delta p_{\text{regulate}}$ . The second wheel may be any wheel, but also the other wheel on the same axle as the first wheel. This may be implemented, for example, based on the rule:  $\Delta p_{\text{control}} = \Delta p_{\text{regulate}} - p_{\text{diff}}$ .

Therefore, the value of  $\Delta p_{\text{control}}$  is established, and this desired pressure differential may be adjusted (controlled) by the current through the associated intake valve. The following method sequence results: 1. current  $i_{\text{regulate}}$  through the intake valve of the regulated wheel is known; 2. pressure differential  $\Delta p_{\text{regulate}}$  decreasing at the intake valve of the regulated wheel is known via the  $i$ - $\Delta p$  characteristic curve; 3. pressure differential  $\Delta p_{\text{control}}$  decreasing at the intake valve of the controlled wheel is known (for example, with a rule:  $\Delta p_{\text{control}} = \Delta p_{\text{regulate}} - p_{\text{diff}}$ ); and 4. necessary current  $i_{\text{control}}$  through the intake valve of the controlled wheel is known via the  $i$ - $\Delta p$  characteristic curve, which may be different or identical for both intake valves considered. (See Specification, pg. 12, lines 4 to 33).

*As to claim 14, it also includes the feature of setting the first brake pressure in the first wheel brake cylinder allocated to the first wheel of the two wheels, in which the first wheel of the two wheels is predesignated as a regulated wheel; and setting the second brake pressure in the second wheel brake cylinder allocated to the second wheel of the two wheels based on a value resulting from the setting of the first brake pressure, in which the second wheel of the two wheels is predesignated as a controlled wheel.* In one wheel of the vehicle the brake pressure is set and the electric current through the coil of the intake valve is known. This wheel is designated as “regulated wheel,” and the other wheel at this axle can be designated as “controlled wheel.” If current  $i_{\text{regulate}}$  flows through the coil of the intake valve of the regulated wheel, pressure differential  $\Delta p_{\text{regulate}}$  decreases at the appertaining intake valve. Pressure differential  $\Delta p_{\text{control}}$  decreasing at the intake valve of another wheel (i.e. the controlled wheel) is controlled based on the pressure differential  $\Delta p_{\text{regulate}}$ . The

other wheel may be any wheel, but may also be the other wheel on the same axle as the regulated wheel. (See Specification, pg. 12, lines 4 to 15).

*As to claim 14, it also includes the feature in which the setting of the second brake pressure includes performing the following: determining a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve; determining, from the desired second pressure differential, a coil current for generating the desired second pressure differential; and using the determined coil current to generate the desired second pressure differential.* The sequence of the method according to the presently claimed subject matter is shown in Figure 7. At the start of the method in block 700, current  $i_{\text{regulate}}$  through the regulated intake valve is predefined. From this, associated pressure drop  $\Delta p_{\text{regulate}}$  is subsequently ascertained in block 701 with reference to the valve characteristic curve. Pressure drop  $\Delta p_{\text{control}}$  at the controlled intake valve is then ascertained in block 702. In block 703, the coil current through the controlled intake valve is known from the characteristic curve of the controlled intake valve. (See Specification, pg. 13, line 32 to pg. 14, line 3 and Fig. 7).

*As to claim 24, it is to a device for braking two wheels of a vehicle, including a logic arrangement for linking a first value of a first brake pressure in a first wheel brake cylinder allocated to a first wheel of the two wheels with a second value of a second brake pressure in a second wheel brake cylinder allocated to a second wheel of the two wheels, in which the linking is given based on hydraulic pressure differentials dropping at respective intake valves including a first intake valve and a second intake valve.* In the present device, in a first wheel of the vehicle the brake pressure is set and the electric current through the coil of the intake valve is known at any time. If current  $i_{\text{regulate}}$  flows through the coil of the intake valve of the first wheel, pressure differential  $\Delta p_{\text{regulate}}$  decreases at the appertaining intake valve. Pressure differential  $\Delta p_{\text{control}}$  decreasing at the intake valve of another wheel (i.e. the second wheel) is controlled based on the pressure differential  $\Delta p_{\text{regulate}}$ . The second wheel may be any wheel, but also the other wheel on the same axle. This may be implemented based on the rule:  $\Delta p_{\text{control}} = \Delta p_{\text{regulate}} - p_{\text{diff}}$ . Therefore, the value of  $\Delta p_{\text{control}}$  is established, and this desired pressure differential may be adjusted (controlled) by the current through the associated intake valve. (See Specification, pg. 12, lines 4 to 21).

*As to claim 24, it also includes the feature of a first setting arrangement to set the first brake pressure in the first wheel brake cylinder allocated to the first wheel of the two wheels, in which the first wheel of the two wheels is predesignated as a regulated wheel; and a second setting arrangement to set the second brake pressure in the second wheel brake cylinder allocated to the second wheel of the two wheels based on a value resulting from the setting of the first brake pressure, in which the second wheel of the two wheels is predesignated as a controlled wheel.* In one wheel of the vehicle the brake pressure is set and the electric current through the coil of the intake valve is known. This wheel is designated as “regulated wheel,” and the other wheel at this axle is a “controlled wheel.” If current  $i_{\text{regulate}}$  flows through the coil of the intake valve of the regulated wheel, pressure differential  $\Delta p_{\text{regulate}}$  decreases at the appertaining intake valve. Pressure differential  $\Delta p_{\text{control}}$  decreasing at the intake valve of another wheel (i.e. the controlled wheel) is controlled based on the pressure differential  $\Delta p_{\text{regulate}}$ . The other wheel may be any wheel, but also the other wheel on the same axle. (See Specification, pg. 12, lines 4 to 15).

*As to claim 24, it also includes the feature in which the second setting arrangement includes: a determining arrangement to determine a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve, and to determine, from the desired second pressure differential, a coil current for generating the desired second pressure differential, in which the determined coil current is used to generate the desired second pressure differential.* The device according to the presently claimed subject matter is shown in Figure 8. Logic arrangement 802 (an ABS control unit) transmits electric currents  $i_{\text{regulate}}$  and  $i_{\text{control}}$  to intake valves 801 and 802. The double lines (2) are hydraulic lines. Via such lines, intake valve 801 is connected to wheel brake cylinder 804 and master brake cylinder 800, and intake valve 803 is connected to wheel brake cylinder 805 and master brake cylinder 800. It is thereby possible to control the hydraulic pressure differential decreasing at the respective intake valve via the electric currents. (See Specification, pg. 14, lines 4 to 14 and Fig. 8).

*In summary, the presently claimed subject matter is to a method for braking two wheels of a vehicle, including linking a first value of a first brake pressure in a first wheel brake cylinder allocated to a first wheel of the two wheels with a second value of a second*

*brake pressure in a second wheel brake cylinder allocated to a second wheel of the two wheels, in which the linking is given based on the hydraulic pressure differentials dropping at respective intake valves including a first intake valve and a second intake valve; setting the first brake pressure in the first wheel brake cylinder allocated to the first wheel of the two wheels, in which the first wheel of the two wheels is predesignated as a regulated wheel; and setting the second brake pressure in the second wheel brake cylinder allocated to the second wheel of the two wheels based on a value resulting from the setting of the first brake pressure, in which the second wheel of the two wheels is predesignated as a controlled wheel, the setting of the second brake pressure includes performing the following: determining a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve; determining, from the desired second pressure differential, a coil current for generating the desired second pressure differential; and using the determined coil current to generate the desired second pressure differential. (See claim 14).*

*In summary, the presently claimed subject matter is also to a device for braking two wheels of a vehicle, including a logic arrangement for linking a first value of a first brake pressure in a first wheel brake cylinder allocated to a first wheel of the two wheels with a second value of a second brake pressure in a second wheel brake cylinder allocated to a second wheel of the two wheels, in which the linking is given based on hydraulic pressure differentials dropping at respective intake valves including a first intake valve and a second intake valve; a first setting arrangement to set the first brake pressure in the first wheel brake cylinder allocated to the first wheel of the two wheels, in which the first wheel of the two wheels is predesignated as a regulated wheel; and a second setting arrangement to set the second brake pressure in the second wheel brake cylinder allocated to the second wheel of the two wheels based on a value resulting from the setting of the first brake pressure, in which the second wheel of the two wheels is predesignated as a controlled wheel, the second setting arrangement including: a determining arrangement to determine a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve, and to determine, from the desired second pressure differential, a coil current for generating the desired second pressure differential, wherein the determined coil current is used to generate the desired second pressure differential. (See claim 24).*

Finally, the appealed claims include no means-plus-function language and no step-plus-function claims, so that 37 C.F.R. 41.37(v) is satisfied as to its specific requirements for such claims, since none are present here. Also, the present application does not contain any step-plus-function claims because the method claims in the present application are not “step plus function” claims because they do not recite “a step for”, as required by the Federal Circuit and as stated in Section 2181 of the MPEP.

#### **6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Whether claims 14 and 16 to 46, under 35 U.S.C. § 103(a) are unpatentable over U.S. Patent No. 5,388,896 (“Hartmann”) in view of U.S. Patent No. 6,030,055 (“Schubert”).

#### **7. ARGUMENT**

##### **THE OBVIOUSNESS REJECTIONS OF CLAIMS 14 AND 16 TO 46**

Claims 14 and 16 to 46 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,388,896 (“Hartmann”) in view of U.S. Patent No. 6,030,055 (“Schubert”).

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co.*,



*Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claim 14 includes the features of setting the first brake pressure in the first wheel brake cylinder allocated to the first wheel of the two wheels, in which the first wheel of the two wheels is predesignated as a regulated wheel, and setting the second brake pressure in the second wheel brake cylinder allocated to the second wheel of the two wheels based on a value resulting from the setting of the first brake pressure, in which the second wheel of the two wheels is predesignated as a controlled wheel, the setting of the second brake pressure including performing the following: determining a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve, determining, from the desired second pressure differential, a coil current for generating the desired second pressure differential, and using the determined coil current to generate the desired second pressure differential.

The “Hartmann” reference refers to triggering a valve allocated to a wheel *to prevent a further build up of pressure* on the wheel. The “Hartmann” reference does not disclose, or even suggest, the feature of setting the brake pressure of one wheel and then setting the brake pressure of another wheel based on a value resulting from the setting of the brake pressure of the first wheel, as provided for in the context of the presently claimed subject matter. As to the Abstract, it merely refers to “the *build-up of braking pressure* on at least one wheel is *influenced*” -- and not to setting the brake pressure in a first wheel and then setting the brake pressure in a second wheel based on a value resulting from the setting of the first brake pressure, as with the presently claimed subject matter. The Abstract further refers to the “braking pressure on the wheels of one axle is influenced to such an extent that *the differential between the braking pressures of one axle does not exceed a maximum permissible value*”. However, the individual braking pressures of the 2 wheels are not set, and instead *a maximum permissible value of the differential between the braking pressures of the wheels of one axle* is determined based on the vehicle speed and the transversal acceleration. As to the cited text at column 3, lines 24 to 45, it refers to what occurs in the event of a sudden, sharp pressure drop on a front wheel, and its effect on the other wheels. This also does not disclose setting the brake pressure in a first wheel and then setting the

brake pressure in a second wheel based on a value resulting from the setting of the first brake pressure, as provided for in the context of the presently claimed subject matter.

Further, the “Hartmann” reference does not disclose, or even suggest, the feature of *predesignating one wheel as a regulated wheel and redesignating another wheel as a controlled wheel*, the brake pressure of the controlled wheel to be set based on a value resulting from the setting of the brake pressure of the regulated wheel. The “Hartmann” reference refers to triggering a valve of one of two wheels to prevent a further build up of pressure. The wheel on which a further build up of pressure is prevented can be *either* of the two wheels, and will be the wheel with the higher pressure when the difference in pressure between the two wheels exceeds a threshold. In particular, the wheel on which a further build up of pressure is prevented is *not redesignated*.

Still further, the Office Actions to date admit that the “Hartmann” reference does not disclose the feature of determining a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve, determining, from the desired second pressure differential, a coil current for generating the desired second pressure differential, and using the determined coil current to generate the desired second pressure differential.

As to the “Schubert” reference, it only refers to a method and a device for regulating pressure in a wheel brake, a regulator for pressure regulation forming a trigger signal from the pressure relationships prevailing at the valve arrangement. A valve arrangement is provided for pressure buildup and reduction. By measuring the actual brake pressure and comparing it with a setpoint pressure, a difference is determined and taken into account with an altered trigger signal. The relationship between the trigger signal and the pressure relationships is stored as a characteristic curve for the pressure buildup and reduction.

As to the cited text at col. 1, lines 47-end of Schubert, it does not disclose using a differential pressure in an intake valve in a control method. However, even if this were so (which is not admitted), the “Schubert” reference does not disclose the feature of determining a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve, as provided for in the context of the presently claimed subject matter.

Accordingly, the “Hartmann” and “Schubert” references, whether taken alone or combined, do not render obvious claim 14.

For at least the reasons explained above, claim 14 is allowable, as are its dependent claims 16 to 23 and 41 to 46.

Claim 24, as presented, includes features analogous to those of claim 14, as presented, and it is therefore allowable for essentially the same reasons as claim 14, as are its dependent claims 25 to 40.

As further regards all of the obviousness rejections, the Examiner never provided an affidavit or provided published information concerning these assertions, even though the § 103 rejections are apparently being based on assertions that draw on facts within the personal knowledge of the Examiner, since no support was provided for these otherwise conclusory and unsupported assertions. (See also MPEP § 2144.03).

As still further regards each of the obviousness rejections, it is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Office's generalized assertions that it would have been obvious to modify or combine the references do not properly support a § 103 rejection. It is respectfully submitted that those cases make plain that the Office Actions to date reflect a subjective “obvious to try” standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon. In particular, the Court in the case of In re Fine stated that:

The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. This it has not done. . . .

**Instead, the Examiner relies on hindsight in reaching his obviousness determination. . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.**

In re Fine, 5 U.S.P.Q.2d at 1598 to 1600 (citations omitted; italics in original; emphasis added). Likewise, the Court in the case of In re Jones stated that:

Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness,

there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . .

**Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill . . . would have been motivated to make the modifications . . . necessary to arrive at the claimed [invention].**

In re Jones, 21 U.S.P.Q.2d at 1943, 1944 (citations omitted; italics in original).

That is exactly the case here since it is believed and respectfully submitted that the Office Actions to date offer no evidence whatsoever, but only conclusory hindsight, reconstruction and speculation, which these cases have indicated does not constitute evidence that will support a proper obviousness finding. Unsupported assertions are not evidence as to why a person having ordinary skill in the art would be motivated to modify or combine references to provide the claimed subject matter of the claims to address the problems met thereby. Accordingly, the Office must provide proper evidence of a motivation for modifying or combining the references to provide the claimed subject matter.

Also, the Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a “technologically simple concept” — which is not the case here — there still must be some finding as to the “specific understanding or principle within the knowledge of a skilled artisan” that would motivate a person having no knowledge of the claimed subject matter to “make the combination in the manner claimed,” stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (emphasis added). Here again, there have been no such findings to establish that the features discussed above of the rejected claims are met by the reference relied upon. As referred to above, any review of the

references, whether taken alone or combined, makes plain that the references simply do not describe the features discussed above of the rejected claims.

Thus, the proper evidence of obviousness must show why there is a suggestion as to the reference so as to provide the subject matter of the claimed subject matter and its benefits.

In short, there is no evidence that the reference relied upon, whether taken alone or otherwise, would provide the features of the claims discussed above. It is therefore respectfully submitted that the claims are allowable for these reasons.

As still further regards all of the obviousness rejections of the claims, it is respectfully submitted that a proper *prima facie* case has not been made in the present case for obviousness, since the Office Actions to date never made any findings, such as, for example, regarding in any way whatsoever what a person having ordinary skill in the art would have been at the time the claimed subject matter of the present application was made. (*See In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998) (the “factual predicates underlying” a *prima facie* “obviousness determination include the scope and content of the prior art, the differences between the prior art and the claimed invention, and the level of ordinary skill in the art”)). It is respectfully submitted that the proper test for showing obviousness is what the “combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art”, and that the Patent Office must provide particular findings in this regard — the evidence for which does not include “broad conclusory statements standing alone”. (*See In re Kotzab*, 55 U.S.P.Q. 2d 1313, 1317 (Fed. Cir. 2000) (citing *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1618 (Fed. Cir. 1999) (obviousness rejections reversed where no findings were made “concerning the identification of the relevant art”, the “level of ordinary skill in the art” or “the nature of the problem to be solved”))). It is respectfully submitted that there has been no such showings by the Office Actions to date or by the Advisory Action.

In fact, the present lack of any of the required factual findings forces both Appellants and this Appeals Board to resort to unwarranted speculation to ascertain exactly what facts underly the present obviousness rejections. The law mandates that the allocation of the proof burdens requires that the Patent Office provide the factual basis for rejecting a patent application under 35 U.S.C. § 103. (*See In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016, 154 U.S.P.Q. 173, 177 (C.C.P.A. 1967))). In short, the Examiner bears the initial burden of presenting a proper

prima facie unpatentability case — which has not been met in the present case. (See In re Oetiker, 977 F.2d 1443, 1445, 24, U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992)).

Accordingly, all of pending claims 14 and 16 to 46 are allowable.

**CONCLUSION**

In view of the above, it is respectfully requested that the rejections of the finally rejected claims 14 and 16 to 46 be reversed, and that these claims be allowed as presented.

Dated: \_\_\_\_\_

6/11/2010

Respectfully submitted,

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**CLAIMS APPENDIX**

1-13. (Canceled).

14. A method for braking two wheels of a vehicle, comprising:

linking a first value of a first brake pressure in a first wheel brake cylinder allocated to a first wheel of the two wheels with a second value of a second brake pressure in a second wheel brake cylinder allocated to a second wheel of the two wheels, wherein the linking is given on the basis of hydraulic pressure differentials dropping at respective intake valves including a first intake valve and a second intake valve;

setting the first brake pressure in the first wheel brake cylinder allocated to the first wheel of the two wheels, wherein the first wheel of the two wheels is predesignated as a regulated wheel; and

setting the second brake pressure in the second wheel brake cylinder allocated to the second wheel of the two wheels based on a value resulting from the setting of the first brake pressure, wherein the second wheel of the two wheels is predesignated as a controlled wheel, the setting of the second brake pressure includes performing the following:

determining a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve;

determining, from the desired second pressure differential, a coil current for generating the desired second pressure differential; and

using the determined coil current to generate the desired second pressure differential.

15. (Canceled).

16. The method as recited in Claim 14, further comprising:

determining a coil current through the first intake valve; and

from the coil current through the first intake valve, determining the first pressure differential.

17. The method as recited in Claim 16, further comprising:  
determining the first pressure differential from the coil current through the first intake valve by evaluating a characteristic curve.
18. The method as recited in Claim 14, further comprising:  
determining the coil current for generating the second pressure differential from a characteristic curve characterizing the second intake valve.
19. The method as recited in Claim 18, wherein the characteristic curve is a curve characterizing a correlation between the second pressure differential and the coil current for generating the second pressure differential.
20. The method as recited in Claim 14, wherein the linking indicates a maximum value for a difference between the first pressure differential and the second pressure differential.
21. The method as recited in Claim 14, wherein the linking indicates a difference between the first pressure differential and the second pressure differential.
22. The method as recited in Claim 21, wherein a difference between the first pressure differential and the second pressure differential is a function of at least one of an existing driving condition and the time.
23. The method as recited in Claim 14, wherein the two wheels belong to the same axle.
24. A device for braking two wheels of a vehicle, comprising:  
a logic arrangement for linking a first value of a first brake pressure in a first wheel brake cylinder allocated to a first wheel of the two wheels with a second value of a second brake pressure in a second wheel brake cylinder allocated to a second wheel of the two wheels, wherein the linking is given based on hydraulic pressure differentials dropping at respective intake valves including a first intake valve and a second intake valve;



a first setting arrangement to set the first brake pressure in the first wheel brake cylinder allocated to the first wheel of the two wheels, wherein the first wheel of the two wheels is predesignated as a regulated wheel; and

a second setting arrangement to set the second brake pressure in the second wheel brake cylinder allocated to the second wheel of the two wheels based on a value resulting from the setting of the first brake pressure, wherein the second wheel of the two wheels is predesignated as a controlled wheel, the second setting arrangement including: a determining arrangement to determine a desired second pressure differential of the hydraulic pressure differentials dropping at the second intake valve from a first pressure differential of the hydraulic pressure differentials dropping at the first intake valve, and to determine, from the desired second pressure differential, a coil current for generating the desired second pressure differential, wherein the determined coil current is used to generate the desired second pressure differential.

25. The device as recited in Claim 24, wherein the logic arrangement is configured so that the first pressure differential and the second pressure differential are linked via a linkage of a first coil current through the first intake valve and a second coil current through the second intake valve.

26. The device as recited in Claim 24, wherein the first intake valve and the second intake valve are differential pressure regulating valves.

27. The device as recited in Claim 24, wherein a coil current through the first intake valve is determined, and wherein the first pressure differential is determined from the coil current through the first intake valve.

28. The device as recited in Claim 16, wherein the first pressure differential is determined from the coil current through the first intake valve by evaluating a characteristic curve.

29. The device as recited in Claim 24, wherein the coil current for generating the second pressure differential is determined from a characteristic curve characterizing the second intake valve.

30. The device as recited in Claim 29, wherein the characteristic curve is a curve characterizing a correlation between the second pressure differential and the coil current for generating the second pressure differential.

31. The device as recited in Claim 24, wherein the linking indicates a maximum value for a difference between the first pressure differential and the second pressure differential.

32. The device as recited in Claim 24, wherein the linking indicates a difference between the first pressure differential and the second pressure differential.

33. The device as recited in Claim 32, wherein a difference between the first pressure differential and the second pressure differential is a function of at least one of an existing driving condition and the time.

34. The device as recited in Claim 24, wherein the two wheels belong to the same axle.

35. The device as recited in Claim 24, wherein the first intake valve and the second intake valve are differential pressure regulating valves, wherein a coil current through the first intake valve is determined, and wherein the first pressure differential is determined from the coil current through the first intake valve, wherein the first pressure differential is determined from the coil current through the first intake valve by evaluating a characteristic curve, and wherein a difference between the first pressure differential and the second pressure differential is a function of at least one of an existing driving condition and the time.

36. The device as recited in Claim 35, wherein the linking indicates a maximum value for a difference between the first pressure differential and the second pressure differential.

37. The device as recited in Claim 35, wherein the linking indicates a difference between the first pressure differential and the second pressure differential.

38. The device as recited in Claim 24, wherein the first intake valve and the second intake valve are differential pressure regulating valves, wherein the coil current for generating the second pressure differential is determined from a characteristic curve characterizing the second intake valve, wherein the characteristic curve is a curve characterizing a correlation between the second pressure differential and the coil current for generating the second pressure differential, and wherein a difference between the first pressure differential and the second pressure differential is a function of at least one of an existing driving condition and the time.

39. The device as recited in Claim 38, wherein the linking indicates a maximum value for a difference between the first pressure differential and the second pressure differential.

40. The device as recited in Claim 38, wherein the linking indicates a difference between the first pressure differential and the second pressure differential.

41. The method as recited in Claim 14, wherein the first intake valve and the second intake valve are differential pressure regulating valves, wherein a coil current through the first intake valve is determined, and wherein the first pressure differential is determined from the coil current through the first intake valve, wherein the first pressure differential is determined from the coil current through the first intake valve by evaluating a characteristic curve, and wherein a difference between the first pressure differential and the second pressure differential is a function of at least one of an existing driving condition and the time.

42. The method as recited in Claim 41, wherein the linking indicates a maximum value for a difference between the first pressure differential and the second pressure differential.

43. The method as recited in Claim 41, wherein the linking indicates a difference between the first pressure differential and the second pressure differential.

44. The method as recited in Claim 14, wherein the first intake valve and the second intake valve are differential pressure regulating valves, wherein the coil current for generating the second pressure differential is determined from a characteristic curve

characterizing the second intake valve, wherein the characteristic curve is a curve characterizing a correlation between the second pressure differential and the coil current for generating the second pressure differential, and wherein a difference between the first pressure differential and the second pressure differential is a function of at least one of an existing driving condition and the time.

45. The method as recited in Claim 44, wherein the linking indicates a maximum value for a difference between the first pressure differential and the second pressure differential.

46. The method as recited in Claim 44, wherein the linking indicates a difference between the first pressure differential and the second pressure differential.

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EVIDENCE APPENDIX

Appellants have not submitted any evidence pursuant to 37 CFR Sections 1.130, 1.131 or 1.132, and do not rely upon evidence entered by the Examiner.

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RELATED PROCEEDINGS INDEX

There are no interferences or other appeals related to the present application.